

STUDIES ON MIKANIA (Compositae)-VII

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Continued studies in the genus Mikania (Compositae-Eupatorieae) have resulted in the following new species and notes on distribution and synonymy of others. This series is preliminary to a monograph of the genus. The title of this series has been changed from "Notes on Mikania" to that cited above, which we feel better reflects content.

MIKANIA ASCHERSONII Hieron., Bot. Jahrb. Syst. 28: 577.

1901. Type: Colombia, Cauca, western slopes of the Andes of Popayan, Lehmann 5979 (B, holotype, not seen; F, isotype).

Mikania aschersonii var. indula Robinson, Contr. Gray Herb. 77: 47. 1926. Type: Peru, Junin, La Merced, Hacienda Schunke, Aug. 22-Sept. 1, 1924, J. F. Macbride 5777 (F, holotype; GH, isotype).

Mikania eupatorioides Blake, Journ. Wash. Acad. 28: 481. 1938. Type: Costa Rica, San Juan, vic. of El General, 1525 m, December 1936, A. F. Skutch 3041 (US, holotype, not seen; GH, isotype).

Until now, Mikania aschersonii was known only from Colombia and Peru, at elevations from 500-2000 m. Robinson (1926), in first citing the plant outside of Colombia expected it to be recorded from Ecuador, but as of this date no specimens have been seen from there. The plant is, in appearance, suggestive of the genus Eupatorium. The involucre scales are oblong and slightly enlarged at the

at the base. The corolla tube is very short in comparison to the abruptly expanded turbinate throat. Corolla teeth are also short. The inflorescence is thyriform, but the heads are ultimately arranged in somewhat dense corymbs. Leaves are very distinctive, green on both sides and with attenuated, normally falcate, tips and cuneate bases. Two pairs of secondary veins originate within 1-2 cm of the base. The tertiary veinlets are very conspicuous, exserted, and prominently reticulate-areolate. Leaf margins are entire to obscurely and remotely denticulate. Much of the plant is covered with darkened, globular, sessile glands. Type and amount of pubescence varies.

Blake (1938) proposed the name Mikania eupatorioides, which, based on description alone, appeared to be synonymous with M. aschersonii. Examination of isotypes of both names showed the two to be essentially identical, with nothing but distribution separating them. On another specimen from Costa Rica [Standley & Valerio 51135 (GH)], also essentially identical with M. aschersonii, is written apparently by B. L. Robinson, Mikania "aschersonii?". Certainly Robinson noted the similarity of this plant with M. aschersonii, but was apparently reluctant to call it that due to geographical separation. Interestingly, Blake, in the same work cited above, proposed another species from Ecuador, M. napensis, which he noted as having close affinities to M. aschersonii, yet he failed to recognize the conspecificity of M. eupatorioides and M. aschersonii.

The addition of Mikania aschersonii to the flora of Central America is a distribution of a most unusual nature, the species being present in Colombia and Peru, and now Costa Rica. Other species of Mikania having a similar distribution include M. bogotensis Benth. of Colombia and Costa Rica (Robinson, 1922) and M. vitifolia DC., a well known species of northern South America, apparently absent from Panama (King and Robinson, 1976), but known from Costa Rica to Mexico.

Specimens Examined: Costa Rica: El Muneco, on the Río Navarro, Cartago, 1400-1500 m, March 6, 7, 1926, P. C. Standley & J. Valerio 51135 (GH); Colombia: Antioquia, Monte de Diablo (La Ceja), July 21, 1944, Bro. Daniel 3278 (US); Cundinamarca, c. 24 km ne of Fusagasuga, 2500-2600 m, E. Cordillera, June 19, 1965, R. M. King & A. E. Guevarra 5672 (US).

Peruvian specimens are cited in Flora of Peru.

MIKANIA COREI Holmes & McDaniel, sp. nov.

Suffrutex volubilis; foliis ovatis, ad 15 cm longis et 7 cm latis, apice acuminato, basi breve angustata, marginibus integris, stipulae cauli adnatae, ca 1.0 cm longis et 1.7 cm latis; inflorescentiis paniculatis capitulis in spicas vel racemis; capitulis ca 5-6 mm longis; corollis ca 4 mm longis, dentibus limbi lanceolato-ovatis, ca 0.8 mm longis, achaenis ca 1.5 mm longis; pappi setis ca 35, ca 3 mm longis, scabridis.

Climbing semi-woody liana; stems terete, somewhat sulcate (after drying), glabrous, internodes to 20 cm or more long, nodes provided with very prominent stipular-like enations, to 1.7 cm wide and 1.0 cm long, margins entire to undulate-dentate. Leaves ovate, semi-coriaceous, to 15 cm or more long and 7 cm wide, apices long attenuate, margins entire, bases rounded to a slightly cuneate base, pinnately nerved, with two pairs of secondary veins originating within 2 cm of the base, arching toward the apex, more or less parallel to the margin, above glabrous, major veins raised, tertiary veins somewhat prominent, reticulate, below glabrous, veins raised, prominently reticulate, petiole to 2.5 cm long, glabrate, grooved above. Inflorescence paniculate, to ca 12 cm long and 9 cm wide, branchlets irregularly pedicellate, ultimately arranged in spikes or very shortly pedicellate in racemes to 3 cm long. Heads ca 5-6 mm long. Exterior bract linear-subulate, borne at the base of the pedicel. Involucral scales ovate to ovate-oblong, ca 3 mm long, apices rounded, ciliolate, margins ciliolate, revolute in age. Corolla white, ca 4 mm long, tube pilose, ca 1.5 mm long, throat funnelform, ca 2.5 mm long, pilose, teeth lanceovate, ca 0.8 mm long, pilose. Achene ca 1.5 mm long, dark olivaceous, ribs lighter in color, glabrate. Pappus bristles white, ca 35, ca 3 mm long, scabrid, slightly thickened at the tips.

Holotype: Colombia: Antioquia. Alto de Portachuelo, head of Río Musinga, in partially cut-over forest, 2100 m, March 26, 1944, Earl L. Core 493 (US).

*Mikania corei* is a beautifully distinct semi-woody species climbing to about nine meters. The most useful distinguishing character is the large stipule-like enations ca 1 cm long and 1.7 cm wide on the nodes. This

seems to be the only species of *Mikania* without a corymbose inflorescence with such structures. Other diagnostic characters include the uniformly pilose corolla, spicate to racemose inflorescence with linear-subulate exterior bracts borne at the base of the pedicel (if present). Leaves are ovate, with long attenuate apices (drip tips), semi-coriaceous, pinnately nerved and very prominently reticulate.

The leaves and inflorescence of *Mikania corei* greatly resemble those of *M. simpsonii* Holmes & McDaniel of Colombia and Peru, the latter species however with whorled leaves and lacking the pilose corolla and large stipule-like structures of the former.

It is a pleasure to name this plant after Dr. Earl L. Core of West Virginia University, student of the Appalachian flora and founder of the botanical journal *Castanea*.

MIKANIA GRACILIS Sch.-Bip. ex Miq., Stirp. Surinam Sel.

187. 1850. Type: Surinam: Hostmann & Kappler 1017 (G, holotype, not seen; MO, isotype).

Robinson (1934), in his treatment of *Mikania vitifolia* DC. and *M. hookeriana* DC., referred *M. gracilis* to *M. hookeriana*, a plant characterized by sessile heads and involucre scales with swollen bases. The heads are arranged in dense spicate panicles. The isotype of *M. gracilis* seen has pedicellate heads and involucre bracts without swollen bases. The inflorescence is an open panicle. Both the involucre scales and leaves have dark glandular punctations. These are all characteristics of *M. vitifolia*, of which *M. gracilis* must be considered a synonym. No explanation, other than clerical error, can be offered for why Robinson failed to correctly place this name. The two species involved are certainly very easily distinguishable.

MIKANIA MATHEWSII B. L. Robinson, Contr. Gray Herb. 61:

18. 1920. Type: Peru, in the Andes, without further location, Mathews 1368 (GH, holotype, F, photo & fragm.; NY, isotype).

This plant of the eastern Andean region, previously unknown outside of Peru, has been confirmed as occurring in Venezuela. Determination was made by comparison with numerous Peruvian specimens and type material. The species is characterized by the paniculate inflorescence

with the heads in somewhat corymbiform clusters at the tips of the branchlets. It appears likely that the continued collection of northwestern South America may place this species in similar locations in Colombia and possibly Ecuador.

Venezuela: Bolívar, Río Chicanan, Cerro Uroi, 700-800 m, Río Uroi, north facing escarpment, vine to 5 m, September 13, 1962, Bassett Maguire, Julian Steyermark & Celia Maguire 53764 (US).

Peruvian specimens are cited in Flora of Peru.

MIKANIA MAZARUNIENSIS Holmes & McDaniel, sp. nov.

Suffrutex volubilis, caule tomento-sericea; foliis ovatis, ca 8 cm longis et 4 cm latis, apice acuto ad attenuato, basi obtusa, marginibus integris; inflorescentiis paniculatis, ad 25 cm longis et 30 cm vel pluris latis; capitulis in racemis ca 8 cm longis; corollis ca 4.4 mm longis, dentibus limbi ovatis, ca 2 mm longis; achaenis ca 3.5 mm longis; pappi setis ca 35, ca 5 mm longis, scabridis.

Vine; stems terete, woolly-sericeous, internodes to ca 11 cm long. Leaves medium green, ovate, ca 8 cm long and 4 cm wide, apices acute to attenuate, bases obtuse, margins entire, pinnately nerved with two pairs of secondary nerves originating within the basal 1/3 to 1/2 of the leaf, more or less paralleling the margins and arching toward the apex, above scabrid, the veins raised, somewhat obscure, below paler, sericeous, veins raised, prominent; petioles woolly-sericeous to glabrate in age, ca 1-1.5 cm long. Inflorescence a panicle, to 25 cm long and 30 cm or more wide, the branches more or less opposite, to 15 cm long, gradually reduced in length upward; bracts similar to cauline leaves, though smaller. Heads ultimately in racemes in the lower part of the inflorescence, the racemes tending to be congested (corymbose) upward. Pedicels 3-5 mm long, sericeous. Exterior bract narrowly ovate, borne slightly beneath the capitulum, glabrate, apices acute, pilose. Heads ca 8 mm long. Involucral scales oblong, ca 4.5 mm long, very sparingly pilose-puberulent, nervate, apices rounded, puberulent. Corolla ca 4.4 mm long, tube ca 2.5 mm long, throat broadly campanulate, throat ca 0.4 mm long, teeth ca 2 mm long, ovate with attenuate apices. Achene ca 3.5 mm long, light

green-olivaceous, broadest near the middle, sparingly pilose-puberulent, the summit much more so, the angles white. Pappus bristles ca 35, ca 5 mm long, scabrid, slightly thickened at the tips.

Holotype: Guyana: Upper Mazaruni River Basin, Kamarana River base of Utschi Falls, 640 m, October 22, 1960, S. S. Tillet & C. L. Tillet 45747 (F).

*Mikania mazuruniensis* has a terete stem covered with woolly-sericeous pubescence. Leaves are scabrid above and sericeous below. The inflorescence is paniculate, the heads ultimately in racemes, those toward the summit tending to be shortened (congested) and somewhat corymbiform. The exterior bracts are borne slightly beneath the involucre. Corolla throats are broadly campanulate, the undivided part very short and the corolla teeth ovate and ca 2 mm long with attenuate apices. The achenes are broadest near the middle and light green-olivaceous in color. Pappus bristles are slightly thickened at the tips.

The densely pubescent stems suggest *Mikania banisteriae* DC. However, that species has a corolla throat with teeth and undivided portion about the same length.

MIKANIA TRIMERIA Holmes & McDaniel, sp. nov.

Herba volubilis; foliis verticillatis, lanceolatis, ad 3.5 cm longis et 0.8 cm latis, apice acuminato, basi attenuata, marginibus integris; inflorescentiis corymbosis umbellis; capitulis ca 7-9 mm longis, corollis ca 4 mm longis, dentibus limbi lanceolatis, ca 1.8 mm longis; achaenis ca 2.8 mm longis; pappi setis ca 40-45, scabridis.

Herbaceous liana; stems terete, striate, glabrate, sparsely puberulent at the nodes and younger parts of the stems; internodes to ca 5 cm long. Leaves verticillate (3 per node), lanceolate, to ca 3.5 cm long and 0.8 cm wide, gradually reduced upward, apices acuminate, bases attenuate, margins entire, pinnately nerved, above glabrate, nerves obscure, below densely puberulent, nerves raised; petioles ca 3-4 mm long, puberulent. Inflorescence umbellate, ca 3.5 cm long and 4.5 cm in diameter. Heads ca 7-9 mm long, sessile, ternately arranged, borne on a peduncle ca 1.5-2 cm long. Exterior bracts narrowly ovate to ovate, ca 4 mm long, apices acute, the outer surfaces puberulent, inner surfaces glabrate. Involucral scales lanceolate, ca 6 mm long, the outer pair puberulent,



nervate, apices attenuate, puberulent, the inner nervate, glabrate, apices narrowed to a rounded puberulent tip. Corolla ca 4 mm long, tube ca 1.2 mm long, gradually expanding into a turbinate throat ca 2.8 mm long, undivided portion ca 1.0 mm in length, teeth lanceolate, ca 1.8 mm long, stigmatic surfaces hirsute. Achene (slightly immature) ca 2.8 mm long, puberulent. Pappus bristles white, ca 40-45, ca 5-6 mm long, scabrid.

Holotype: Colombia: Amazonas-Vaupes. Río Apaporis: Raudal Yayacopi (La Playa) and vicinity, quartzite base, 800 ft., 0°5' S, 70°30' W, April 15, 1952, Richard E. Schultes & Isidoro Cabrera 16221 (US).

*Mikania trimeria*, known only from the type, is a very distinctive species characterized by whorled (three per node) lanceolate leaves with puberulent undersurfaces. The inflorescence is somewhat umbellate with the heads sessile and ternately arranged. Exterior bracts are ovate to obovate with puberulent outer surfaces. The corolla throat is turbinate with lanceolate teeth about 2X the length of the undivided portion. Stigmatic surfaces are hirsute.

The characteristics of the inflorescence and flowers suggest affinity with the *Mikania parviflora* (Aubl.) Karst. *M. guaco* H. & B. group, all of which have sessile ternately arranged heads and hirsute stigmatic surfaces. Since the new species the corolla teeth are twice the length of the undivided portion, relationship is probably with *M. speciosa* DC., *M. trinitaria* DC., and *M. allartii* B. L. Robinson. These latter mentioned species have opposite, ovate leaves.

MIKANIA VAUPESENSIS Holmes & McDaniel, sp. nov.

Suffrutex volubilis; foliis lanceolatis vel lanceolato-ovatis, ad 9 cm longis et 3.5 cm latis, apice acuminato, basi obtusa vel acuta, marginibus integris; inflorescentiis corymbosis; capitulis ca 9-10 mm longis, sessilibus, ternatis; corollis ca 4.5 mm longis, dentibus limbi lanceolatis, ca 2 mm longis; achaenis ca 5 mm longis; pappi setis ca 50-60, ca 5 mm longis, scabridis.

Twining liana; stems somewhat hexagonal, the ribs obscurely winged, glabrate, internodes to 13 cm long. Leaves lanceolate to lance-ovate, to ca 9 cm long and 3.5 cm wide, apices acuminate, margins entire, bases obtuse to acute, cuneate at point of insertion of petiole, above

glabrate, pinnately veined, with 2 pairs of secondary veins originating within the basal one-fifth of the leaf, primary and secondary nerves visible, the other obscure, below densely puberulent, often glandular, veins prominent, reticulate, exserted, puberulent, petiole ca 1 cm long. Inflorescence a corymb, terminal and lateral, to ca 6 cm long and 7 cm wide, peduncle to ca 4-5 cm long, branchlets ternately branching, puberulent. Heads sessile, borne in groups of 3's at the tips of the branchlets, sessile or shortly pedicellate, ca 9-10 mm long. Exterior bract lance-ovate, less than one-half the length of the involucre, apices acute, puberulent. Involucral scales oblong oblong to narrowly ovate, ca 4-4.5 mm long, puberulent, apices rounded, puberulent. Corolla pinkish, glandular, ca 4.5 mm long, tube ca 1.5 mm long, somewhat abruptly expanded into the narrowly campanulate throat ca 3.0 mm long, teeth lanceolate ca 2 mm long (ca 2-3X the undivided portion of throat). Achene light green, ca 5 mm long, puberulent. Pappus bristles 50-60, ca 5 mm long, white, scabrid, slightly connate at the base. Stigmatic surfaces hirsute.

Holotype: Colombia: Vaupes. Río Vaupes, near Mitu, November 13, 1952, Richard Evans Schultes & Isidoro Cabrera 18422 (GH).

The new species is characterized by ternately arranged, sessile heads. The pink corolla has teeth 2-3 times the length of the undivided portion. Leaves are lanceolate to lance-ovate and densely puberulent below.

The inflorescence suggests affinities to the Mikania parviflora (Aubl.) Karst.-M. guaco H. & B. complex. The proportional length of the corolla teeth place it near M. allartii B. L. Robinson, M. trinitaria DC., or M. speciosa DC., all with similar corollas. These three species have much broader leaves, normally ovate to oval. Mikania trinitaria and M. speciosa also have a tendency for the leaf bases to be cuneately decurrent upon the petiole. Mikania allartii is described as having scabrid-setulose leaves. None of the above characters are found in M. vaupesensis.

Also with ternately arranged, sessile heads is Mikania stygia B. L. Robinson, of Peru and Bolivia, with lanceolate leaves. However, the lower leaf surfaces are glabrous and the corolla teeth much shorter than the undivided portion of the tube. It also turns black upon drying.



Paratype: Colombia: Amazonas-Vaupés. Río Apaporís, Raudal Yayacopi (La Playa) and vicinity, 800 ft. above msl, quartzite base, August 18, 1952, Richard Evans Schultes & Isidoro Cabrera 16957 (GH).

## LITERATURE CITED

- Blake, S. F. 1938. Eleven new American Asteraceae. Jour. Wash. Acad. 28: 478-492.
- King, R. M. and H. Robinson. 1976. Flora of Panama: Compositae. II. Eupatorieae. Ann. Mo. Bot. Gard. 62: 888-1004.
- Robinson, B. L. 1922. The Mikanias of Northern and Western South America. Contr. Gray Herb. 64: 21-116.
- \_\_\_\_\_. 1926. Records Preliminary to a General Treatment of the Eupatorieae-VI. Contr. Gray Herb. 77: 1-66.
- \_\_\_\_\_. 1934. The Variability of Two Wide-Ranging Species of Mikania. Contr. Gray Herb. 104: 49-55.